

Message

From: Robert E Dickinson [Ex. 6 Personal Privacy (PP)]
Sent: 2/13/2020 11:30:58 AM
To: Heineman, Mitchell [HeinemanMC@cdmsmith.com]
CC: Simon, Michelle [Simon.Michelle@epa.gov]
Subject: Re: EPA_SIMON - Invitation to collaborate

Valid points, Mitch but frankly this comment "everywhere I look there are errors and annoyances" apply to any software project. The important thing (to me) at least is there seems to be a GUI written in PyQt that works (80 to 90 percent) for EPANET and SWMM5. Michelle and her group are trying to fix the issues and she has some help still from RESPEC. Lew is one of a kind and writes great code and UX's but it would be a shame to lose this opportunity to have a workable UX for both EPANET and SWMM5 that looks the same. I don't care about the QGIS component as it somewhat competes with Innovyze but having a Python-based UX would be good for the future.

On Wed, Feb 12, 2020 at 11:42 AM Heineman, Mitchell <HeinemanMC@cdmsmith.com> wrote:

Hi Michelle –

Everywhere I look there are errors and annoyances. I think I'll wait to look again until the next 'release' build unless you persuade me otherwise. I observed the items below this morning to follow up on your observations

1. Adding a baseline Inflow to a node also generates an empty [RDII] section and a bogus [DWF] section in the input file. Lew is a master of parsimony, as a good modeler should be. Neither of these should be created. Worse, the [Inflows] entry is invalid - there should be empty quotes in the Time Series field. This same issue gets worse when one then runs the model.

[DWF]

;;Node	Constituent	Baseline	Patterns
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;;-----	-----	-----	-----
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O1	FLOW		
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[RDII]

;;Node	Unit Hydrograph	Sewer Area
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;;-----	-----	-----
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[INFLOWS]

;;Node Baseline	Constituent Pattern	Time Series	Type	Mfactor	Sfactor
;;-----	-----	-----	-----	-----	-----
O1	FLOW		FLOW		1

2. Hitting Run for an unsaved model prompts a “Save As” dialog. In the Delphi GUI and many other softwares, this would trigger an automatic save with the existing name
3. There is no provision for loading existing or saving new profiles. When a [Profiles] section is found in an existing input file, it’s rejected as an error. (Frankly, I rarely use saved profiles, and it’s purely a GUI feature, so perhaps dropping it isn’t that big a deal). However even creating a profile looked terrible, as I couldn’t see a way to select items by clicking them in the map, only to pick them from a pull-down list.
4. The software is pretty hopeless if one can’t get to the run [Options] section, which I can’t. I saw it work once or twice, but can’t figure out why it does or doesn’t activate.
5. The program adds a [LOSSES] table entry for all conduits. This is functionally harmless, but violates parsimony. Similarly, it adds zeroes and such for unused optional fields onto the end of many records in various sections.

In our call last week Bob asked about the Lazarus GUI that Lew apparently explored. I suppose I’ll ask the same question more broadly and pointedly – is this GUI really worth pursuing given how excellent the existing one is? You could bite the bullet and continue with Embarcadero Delphi, which has a free version for hobbyists and is modestly priced for professionals. Or you could pursue porting the existing code to Lazarus. Its homepage suggests fully compatibility with Delphi. As Bob mentioned, the existing Delphi GUI is very robust. In contrast, the PyQGIS interface has a long way to go before it even recreates the functionality of the Delphi code, and does not offer anything much beyond it for me – I see that it’s meant to be script-friendly, but how important is that to most users? I do think it’s valuable to have a robust EPA interface. I regularly use PCSWMM and MIKE URBAN for my SWMM models, am looking forward to using InfoWorks ICM for them as well (they’re adding full support for SWMM into it), and occasionally use SewerGEMS and InfoSWMM as well. For much of my work though, I rely on the EPA interface because it’s fast, friendly, and light. I also exclusively use it for training, since its simple interface lets me focus on teaching engineering and modeling rather than how to navigate one’s way through a complex interface.

From: Simon, Michelle <Simon.Michelle@epa.gov>
Sent: Tuesday, February 11, 2020 5:01 PM
To: Robert Dickinson <Robert.Dickinson@epa.gov> **Ex. 6 Personal Privacy (PP)**
Cc: Heineman, Mitchell <HeinemanMC@cdmsmith.com>
Subject: RE: EPA_SIMON - Invitation to collaborate

Hi Bob,

Thank you for the files. These files have different conduit geometries, storage units pump curves, more complicated nodes, flooding, surcharging, and other things that I wanted to test in the new SWMM-GUI. I could successfully generate output from 59 of the 71 files.

Michelle

Of these 71 files, I am missing a few supporting files for 6 input files.

1. D:\2016PC\Spring2014\PUMPVenant.HSF for Session10_OutfallBC_65_H_Element.inp
2. C:\NCIMM_Training\Data_Files\RAIN_GW.DAT for Session11_Continuous_Groundwater.inp
3. C:\NCIMM_Training\Data_Files\rdu.dat for Session2_WestCampusWatershed.inp
4. C:\NCIMM_Training\Data_Files\376698Providence.NCD for Session17_Extran_Master_Hydrology.inp
5. D:\SWMMandSoftware\SWMM5.013_June2018\EPASWMM5.1.013\Swmm5.1.013UpdateTests\Data_Files\RAIN_GW.DAT

For Session39_Continuous_Model_WQ.inp

6. C:\NCIMM_Training\Data_Files\sta310301.dat for Session72_CS_epaswmm5.inp

I cannot run input files with these errors:

1. ERROR 205: invalid keyword 0.000000 at line 6138 of [PATTERN] section:

LIVE_SWITCHBOARDHOURLY	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	for Session18_GreenvilleSnowmelt.inp		

2. Unrecognized word [PROFILES] in Session23_10_Sub_Continuous

3. ERROR 205: invalid keyword 1.000000 at line 59862 of [PATTERN] section:

BASEFLOW_PATTERNMONTHLY	1.000000	1.000000	1.000000	1.000000
1.000				

In Session37_101_H&H_Elements.inp

4. Could not input Session38_100_Control_Rules.inp – took too long

5. Could not run Session49_seas_level_pump_model - not a SWMM File

6. For Session70_usgs_5_pollutants.inp

ERROR 203: too few items at line 84 of [SUBAREA] section:

'HortonInfiltration' object has no attribute 'suction'

ERROR 203: too few items at line 85 of [SUBAREA] section:

None

From: Robert Dickinson (via Google Drive) **Ex. 6 Personal Privacy (PP)**
Sent: Tuesday, February 11, 2020 11:49 AM
To: Simon, Michelle <Simon.Michelle@epa.gov>
Subject: EPA_SIMON - Invitation to collaborate

Ex. 6 Personal Privacy (PP) has invited you to **contribute** to the following shared folder:



EPA_SIMON



Seventy medium sized test files based on real models



Google Drive: Have all your files within reach from any device.

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